

VACCINIUM SEMPERVIRENS (ERICACEAE),
A NEW SPECIES FROM ATLANTIC WHITE-CEDAR BOGS
IN THE SANDHILLS OF SOUTH CAROLINA

DOUGLAS A. RAYNER AND JAMES HENDERSON

In the course of routine field work for the South Carolina Heritage Trust Program (SCHTP), the senior author became interested in a small ericaceous plant growing in the Atlantic white-cedar community that has developed on the seepage slopes surrounding an old sandhills mill pond, Shealy's Pond, Lexington County, South Carolina. White-cedar bogs are scarce in South Carolina, and we at the SCHTP were particularly interested in this one because in addition to the 100–150 year old white-cedar, the area harbors three species of sundews (1 rare), three of the four species of pitcher plants found in South Carolina, a rare bulrush (*Scirpus subterminalis* Torrey), a rare spikerush (*Eleocharis robbinsii* Oakes), and the ericaceous plant in question.

The identity of this heath apparently has been in question for some time. Because it produces few flowers and even fewer fruits, most previous identifications have been based only on leaf characters and plant habit. The leaves of *Vaccinium sempervirens* superficially resemble those of both *Vaccinium crassifolium* Andrews and *Gaylussacia brachysera* (Michaux) Gray. Plants at the pond—white-cedar and white-cedar—sandhills ecotones tend to creep along the ground and produce few ascending branches (much like *V. crassifolium*); plants within the white-cedar community are almost inevitably erect or ascending (like *G. brachysera*). Therefore, it is not surprising that this species has been misidentified as either *V. crassifolium* or *G. brachysera* by a number of different botanists (Pers. comm. Dr. W. T. Batson, University of South Carolina, Columbia, and Dr. A. E. Radford, University of North Carolina, Chapel Hill).

After examining herbarium specimens and descriptions in local floras, it became evident that the leaves of this ericad were much too large for the plant to be either *V. crassifolium* or *G. brachysera*. In mid-June and late July, 1977, the senior author was able to find immature fruits and dried flowers. Since the fruits were 5-celled, many seeded berries, the plant obviously was a *Vaccinium*. But, it did not correspond to any species of *Vaccinium* described in Rad-

ford et al. (1964) or in Gleason (1968). A thorough search of the literature revealed no published description fitting this species. In the course of conversations and correspondence with Dr. Albert Radford (University of North Carolina) and Dr. Robert Godfrey (retired at The Florida State University), the senior author learned that several specimens determined as *Vaccinium sempervirens* Henderson, and identical to the ericad at Shealy's Pond, were on deposit in The Florida State University herbarium. Correspondence from Mr. Steven W. Leonard (a graduate student at The Florida State University and a former graduate student at the University of North Carolina) dated 12 Oct. 1977, revealed the following details: The first formal collection of the plant in question was made on July 14, 1968, by John Logue (now at the Sumter branch of the University of South Carolina) from, "Moist pocosin, Congaree girl scout camp. 4 1/2 miles SW of Edmund, Lexington County, S.C." Specimens from this collection were identified as *Gaylussacia brachysera* and sent out on exchange from the University of North Carolina to perhaps 100 institutions. In 1971, James Henderson, who was working on a revision of *Gaylussacia* at Vanderbilt University, annotated loans of Logue's *G. brachysera* as *Vaccinium sempervirens* Henderson.

Telephone conversations with Mr. Henderson revealed that he had not published a description of *V. sempervirens* because his tentative identification was based solely on fruiting material. Moreover, he had not visited the site. Since the senior author had seen flowering and fruiting material and had visited the site, we agreed to collaborate on the description of the species.

***Vaccinium sempervirens* Rayner and Henderson, *sp. nov.* (Figure 1)**

Frutex erectus, ascendens aut repens, 1–4 dm altus, aut ad 1 m longus; ramunculis teretibus, puberulis usque glabris; laminis coriaceis sempervirentibus, obovatis usque ellipticus, 2.2–5.5 cm longis, 1.3–3.0 cm latis, margine leviter revolutis subtiliter mucronato-crenulatis, supra nitentibus, costa et nervis secundariis puberulis, infra subviridibus glabris, costa prominenti, nervis secundariis et venulis obscuris; petiolis 1–3 mm longis; inflorescentia axillari racemosa, floribus 3–9; rhacidi 6–18 mm longa; bracteis 1–2 mm longis persistentibus; calyce viridi, 2–2.5 mm longo, 5-lobato, lobis minu-



Figure 1. *Vaccinium sempervirens* Rayner and Henderson. A. Habit sketch showing vegetative reproduction by air layering B. Photo of flowering branch.

tis; corolla alba usque rubicunda sed diluta, globulari-urceolata, 3–5 mm longa, circiter 4 mm lata, tubo puberulo, lobis minutis acutis reflexis; bacca matura atra, 4–5 mm longa et 5–6 mm lata.

TYPE: UNITED STATES. **South Carolina.** Lexington Co.: within the Atlantic white-cedar stand that has developed on the seepage slopes surrounding an old sandhills millpond, Shealy's Pond, July 23, 1977, *D. A. Rayner 1000*. Holotype at USCH.

Habitat: Atlantic white-cedar communities on seepage slopes in the sandhills of South Carolina.

Flowering occurs in late April and early May, and fruits mature in late August and September. Asexual reproduction is by air layering and is the primary determinant of colony size.

Ilex glabra (L.) Gray, gallberry, is another species whose leaves superficially resemble those of *Vaccinium sempervirens*. The leaves of *I. glabra* are sparsely, but distinctly, crenate toward the apex; leaves of *V. sempervirens* are minutely crenate-serrate throughout, but most clearly toward the apex.

As far as is presently known, the species is restricted to Atlantic white-cedar communities that have developed on seepage slopes along the headwaters (about 6 miles) of Scouter Creek in the sandhills of Lexington Co., S. C. All other streams in the Lexington Co. area that are bounded by Atlantic white-cedar were examined during the summer of 1978; no *V. sempervirens* was found. An Atlantic white-cedar bog in Richland Co., S. C. also was examined, with negative results.

A comprehensive status report on this species was prepared by the senior author for the S. C. Wildlife and Marine Resources Department and was submitted on October 15, 1978 to the U. S. Fish and Wildlife Service, Office of Endangered Species, in support of formal listing of the species as Nationally Endangered.

ACKNOWLEDGEMENTS

We extend our sincere appreciation to Mr. James Lipovsky, Classics Dept., University of South Carolina, Columbia, for assistance with the Latin translation. We, of course, assume responsibility for any errors or omissions.

We also wish to thank Mr. Joe Byrnn, S. C. Wildlife and Marine Resources Dept., Columbia, S. C., for the line drawing of *V. sempervirens*, (Figure 1A) and Mr. Phillip Jones, S. C. Wildlife & Marine Resources Dept., Columbia, S.C., for the photo of *V. sempervirens* (Figure 1B).

LITERATURE CITED

- RADFORD, A. E., H. E. AHLES & C. R. BELL. 1968. *Manual of the Vascular Flora of the Carolinas*. The University of North Carolina Press, Chapel Hill.
- GLEASON, H. A. 1968. *The New Britton and Brown Illustrated Flora of the Northeastern United States and adjacent Canada*. (Fourth Printing) Hafner Publishing Company, Inc., New York and London.

D.A.R.

HERITAGE TRUST PROGRAM

SOUTH CAROLINA WILDLIFE AND MARINE RESOURCES DEPT.

P.O. BOX 167

COLUMBIA, S.C. 29202

J.H.

BIOLOGY DEPT.

SOUTH CAMPUS

MIAMI DADE JUNIOR COLLEGE

MIAMI, FLORIDA